LISTING OF CLIAMS

Claims 1-24 (CANCELED)

25. (NEW) A method for treating pain hypersensitivity in a living animal body, including a human, such method comprising administering to the living animal body, including a human, a therapeutically effective amount of an 1-amino-alkylcyclohexane derivative.

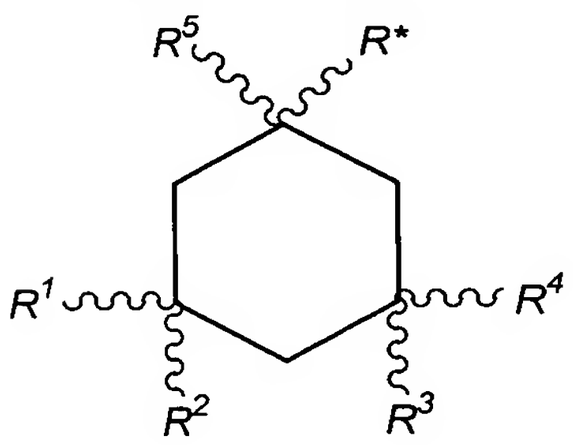
26. (NEW) The method of Claim 25, wherein the pain hypersensitivity is hyperalgesia.

27. (NEW) The method of Claim 25, wherein the pain hypersensitivity is allodynia.

28. (NEW) The method of Claim 25, wherein the pain hypersensitivity is selected from visceral hypersensitivity, musculoskeletal allodynia/hyperalgesia, and cutaneous allodynia/hyperalgesia.

29. (NEW) The method of Claim 28, wherein the visceral hypersensitivity is associated with disorders selected from irritable bowel syndrome (IBS), gastroesophageal reflux disease (GERD), and functional dyspepsia.

30. (NEW) The method of Claim 25, wherein the 1-amino-alkylcyclohexane derivative is selected from those of formula (I):



(I)

wherein R* is $--(CH_2)_n--(CR^6R^7)_m--NR^8R^9$

wherein n+m=0, 1, or 2

wherein R^1 through R^7 are independently selected from hydrogen and lower-alkyl (1-6C), at least R^1, R^4, and R^5 being lower-alkyl, and wherein R^8 and R^9 are independently selected from the group consisting of hydrogen and lower-alkyl (1-6C) or together represent lower-alkylene $--(CH_2)_x--$ wherein x is 2 to 5, inclusive, and enantiomers, optical isomers, hydrates, and pharmaceutically-acceptable salts thereof.

31. (NEW) The method of Claim 30, wherein the 1-amino-alkylcyclohexane derivative is selected from:

1-amino-1,3,5-trimethylcyclohexane,

1-amino-1(trans),3(trans),5-trimethylcyclohexane,

1-amino-1(cis),3(cis),5-trimethylcyclohexane,

1-amino-1,3,3,5-tetramethylcyclohexane,

1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane),

1-amino-1,3,5,5-tetramethyl-3-ethylcyclohexane,

1-amino-1,5,5-trimethyl-3,3-diethylcyclohexane,

1-amino-1,5,5-trimethyl-cis-3-ethylcyclohexane,

1-amino-(1S,5S)cis-3-ethyl-1,5,5-trimethylcyclohexane,

1-amino-1,5,5-trimethyl-trans-3-ethylcyclohexane,

1-amino-(1R,5S)trans-3-ethyl-1,5,5-trimethylcyclohexane,

1-amino-1-ethyl-3,3,5,5-tetramethylcyclohexane,

1-amino-1-propyl-3,3,5,5-tetramethylcyclohexane,

N-methyl-1-amino-1,3,3,5,5-pentamethylcyclohexane,

N-ethyl-1-amino-1,3,3,5,5-pentamethyl-cyclohexane,

N-(1,3,3,5,5-pentamethylcyclohexyl) pyrrolidine,

3,3,5,5-tetramethylcyclohexylmethylamine,

1-amino-l-propyl-3,3,5,5-tetramethylcyclohexane,

1 amino-1,3,3,5(trans)-tetramethylcyclohexane (axial amino group),

3-propyl-1,3,5,5-tetramethylcyclohexylamine semihydrate,

1-amino-1,3,5,5-tetramethyl-3-ethylcyclohexane,

1-amino-1,3,5-trimethylcyclohexane,

1-amino-1,3-dimethyl-3-propylcyclohexane,

1-amino-1,3(trans),5(trans)-trimethyl-3(cis)-propylcyclohexane,

1-amino-1,3-dimethyl-3-ethylcyclohexane,

1-amino-1,3,3-trimethylcyclohexane,

cis-3-ethyl-1(trans)-3(trans)-5-trimethylcyclohexamine,

1-amino-1,3(trans)-dimethylcyclohexane,

1,3,3-trimethyl-5,5-dipropylcyclohexylamine,

1-amino-1-methyl-3(trans)-propylcyclohexane,

1-methyl-3(cis)-propylcyclohexylamine,

1-amino-1-methyl-3(trans)-ethylcyclohexane,

1-amino-1,3,3-trimethyl-5(cis)-ethylcyclohexane,

1-amino-1,3,3-trimethyl-5(trans)-ethylcyclohexane,

cis-3-propyl-1,5,5-trimethylcyclohexylamine,

trans-3-propyl-1,5,5-trimethylcyclohexylamine,

N-ethyl-1,3,3,5,5-pentamethylcyclohexylamine,

N-methyl-l-amino-1,3,3,5.5-pentamethylcyclohexane,

1-amino-l-methylcyclohexane,

N,N-dimethyl-1-amino-1,3,3,5,5-pentamethylcyclohexane,

2-(3,3,5,5-tetramethylcyclohexyl)ethylamine,

2-methyl-l-(3,3,5,5-tetramethylcyclohexyl)propyl-2-amine,

2-(1,3,3,5,5-pentamethylcyclohexyl-l)-ethylamine semihydrate,

N-(1,3,3,5,5-pentamethylcyclohexyl)-pyrrolidine,

1-amino-1,3(trans),5(trans)-trimethylcyclohexane,

1-amino-1,3(cis),5(cis)-trimethylcyclohexane,

1-amino-(1R,SS)trans-5-ethyl-1,3,3-trimethylcyclohexane,

1-amino-(1S,SS)cis-5-ethyl-1,3,3-trimethylcyclohexane,

1-amino-1,5, 5-trimethyl-3(cis)-isopropyl-cyclohexane,

1-amino-1,5,5-trimethyl-3(trans)-isopropyl-cyclohexane,

1-amino-1-methyl-3(cis)-ethyl-cyclohexane,

1-amino-1-methyl-3(cis)-methyl-cyclohexane,

1-amino-5,5-diethyl-1,3,3-trimethyl-cyclohexane,

1-amino-1,3,3,5,5-pentamethylcyclohexane,

1-amino-1,5,5-trimethyl-3,3-diethylcyclohexane,

1-amino-l-ethyl-3,3,5,5-tetramethylcyclohexane,

N-ethyl-l-amino-1,3,3,5,5-pentamethylcyclohexane,

N-(1,3,5-trimethylcyclohexyl)pyrrolidine or piperidine,

N-[1,3(trans),5(trans)-trimethylcyclohexyl]pyrrolidine or piperidine,

N-[1,3(cis),5(cis)-trimethylcyclohexyl]pyrrolidine or piperidine,

N-(1,3,3,5-tetramethylcyclohexyl)pyrrolidine or piperidine,

N-(1,3,3,5,5-pentamethylcyclohexyl)pyrrolidine or piperidine,

N-(1,3,5,5-tetramethyl-3-ethylcyclohexyl)pyrrolidine or piperidine,

N-(1,5,5-trimethyl-3,3-diethylcyclohexyl)pyrrolidine or piperidine,

N-(1,3,3-trimethyl-cis-5-ethylcyclohexyl)pyrrolidine or piperidine,

N-[(1S,SS)cis-5-ethyl-1,3,3-trimethylcyclohexyl]pyrrolidine or piperidine,

N-(1,3,3-trimethyl-trans-5-ethylcyclohexyl)pyrrolidine or piperidine,

N-[(1R,SS)trans-5-ethyl,3,3-trimethylcyclohexyl]pyrrolidine or piperidine,

N-(1-ethyl-3,3,5,5-tetramethylyclohexyl)pyrrolidine or piperidine,

N-(1-propyl-3,3,5,5-tetramethylcyclohexyl)pyrrolidine or piperidine,

N-(1,3,3,5,5-pentamethylcyclohexyl)pyrrolidine,

their optical isomers, diastereomers, enantiomers, hydrates, their pharmaceutically acceptable salts, and mixtures thereof.

32. (NEW) A method for treating neuropathic pain in a living animal body, including a human, such method comprising administering to the living animal body, including a human, a therapeutically effective amount of an 1-amino-alkylcyclohexane derivative devoid of an adamantane (pyramidal) structure.

33. (NEW) The method of Claim 30, wherein the 1-amino-alkylcyclohexane derivative is selected from neramexane and prodrugs, salts, isomers, analogs and derivatives thereof.

34. (NEW) The method of Claim 33, wherein the 1-amino-alkylcyclohexane derivative is neramexane.

35. (NEW) The method of Claim 30, wherein the 1-amino-alkylcyclohexane derivative is administered in an amount of 1 to 200 mg per day.

36. (NEW) The method of Claim 35, wherein the 1-amino-alkylcyclohexane derivative is administered in an amount of 10 to 40 mg per day.

37. (NEW) A method for treating pain hypersensitivity in a living animal body, including a human, such method comprising administering to the living animal body, including a human, a therapeutically effective amount of an 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane), or prodrug, salt, isomer, analog or derivative thereof.

38. (NEW) The method of Claim 37, wherein the pain hypersensitivity is hyperalgesia.

39. (NEW) The method of Claim 37, wherein the pain hypersensitivity is allodynia.

40. (NEW) The method of claim 37, wherein the pain hypersensitivity is selected from visceral hypersensitivity, musculoskeletal allodynia/hyperalgesia and cutaneous allodynia/hyperalgesia.

41. (NEW) The method of Claim 40, wherein the visceral hypersensitivity is associated with disorders selected from irritable bowel syndrome (IBS), gastroesophageal reflux disease (GERD), and functional dyspepsia.

42. (NEW) A method for treating neuropathic pain in a living animal body, including a human, such method comprising administering to the living animal body, including a human, a therapeutically effective amount of an 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof.

43. (NEW) The method of Claim 37, wherein the 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof is administered in an amount of 1 to 200 mg per day.

44. (NEW) The method of Claim 43, wherein the 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof is administered in an amount of 10 to 40 mg per day.

45. (NEW) The method of Claim 37, wherein the 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof is administered in an amount of 5 to 100 mg per day.

46. (NEW) The method of Claim 45, wherein the 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof is administered in an amount of 12.5 to 80 mg per day.

47. (NEW) The method of Claim 42, wherein the 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof is administered in an amount of 1 to 200 mg per day.

48. (NEW) The method of Claim 47, wherein the 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof is administered in an amount of 10 to 40 mg per day.

49. (NEW) The method of Claim 42, wherein the 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof is administered in an amount of 5 to 100 mg per day.

50. (NEW) The method of Claim 49, wherein the 1-amino-1,3,3,5,5-pentamethylcyclohexane (neramexane) or prodrug, salt, isomer, analog, or derivative thereof is administered in an amount of 12.5 to 80 mg per day.